



# A Structured, Physiology-Centered FRAMEWORK to Improve Chronic Wound Assessment and Documentation

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## The Problem & The Biological Model

- Chronic wound documentation is frequently fragmented, with emphasis placed on surface appearance and dressing selection rather than on underlying wound biology.
- Product-driven documentation obscures physiologic reasoning, weakens continuity between assessment and plan, and complicates demonstration of medical necessity.
- Chronic wounds fail to heal primarily because of unaddressed biologic barriers, not because of insufficient product use.
- A physiology-centered framework shifts documentation from “what was applied” to why an intervention is indicated based on wound phase and healing impairments.
- Organizing care around healing phases and systemic and local barriers improves clinical clarity, inter-provider communication, and regulatory defensibility.

## Phases of Healing Overview



## Where is the wound biologically?

Determining where a wound exists biologically is the first step in rational treatment. The clinician evaluates the wound’s physiologic state rather than focusing primarily on dressing selection.

Wounds in the Cleaning phase show necrosis, slough, heavy bioburden, or persistent inflammation and require removal of devitalized tissue and control of infection.

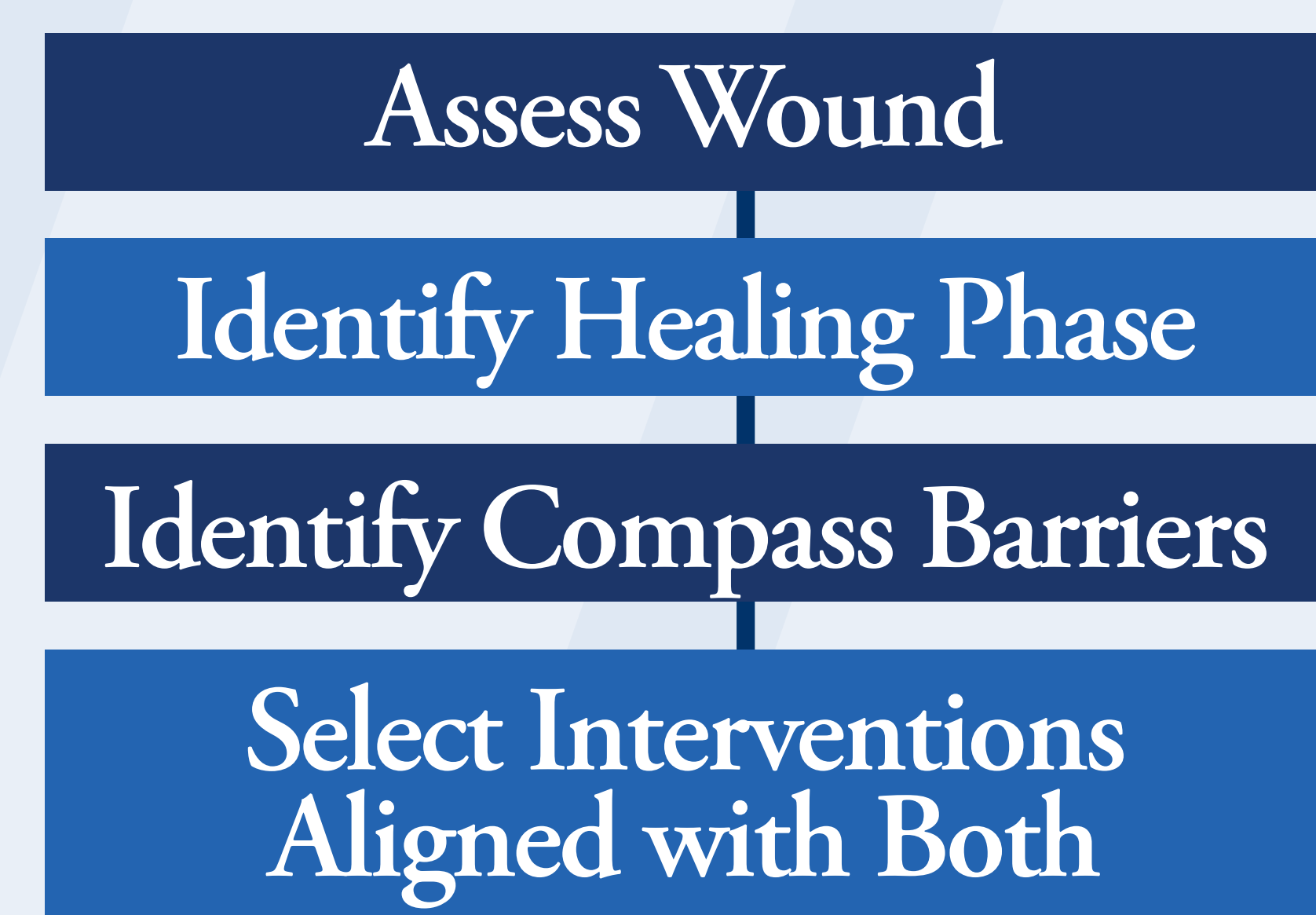
Wounds in the Building phase demonstrate granulation tissue formation and active angiogenesis, indicating that the environment is supportive of tissue reconstruction.

Wounds in the Closing phase exhibit epithelial migration, contraction, and progressive surface coverage.

Identifying the current biological phase clarifies priorities and allows interventions to be directed toward moving the wound forward through the normal sequence of healing.

## Methods

- A structured documentation model was developed using two core components:
  - Phases of Healing: Cleaning, Building, and Closing
  - Healing Impairment Domains: Local and systemic factors affecting wound progression
- Providers classified each wound by its active biologic phase based on objective wound-bed findings.
- Local wound healing impairment factors (e.g., pressure, edema, infection) were identified and documented at each visit.
- Systemic wound healing impairment factors (e.g., perfusion, metabolic status, nutrition) were assessed and recorded.
- Clinical interventions were selected and documented based on:
  - Active healing phase
  - Identified local barriers
  - Identified systemic barriers
- Documentation was evaluated for:
  - Completeness
  - Internal clinical logic
  - Clarity of medical necessity



## Documentation Logic

- When the wound is in the Cleaning Phase, the dominant problems are necrosis and bioburden, and the appropriate documented response is debridement and contamination control.
- When the wound is in the Building Phase, the dominant problem is inadequate granulation, and the appropriate documented response is matrix support and optimization of local and systemic biology.
- When the wound is in the Closing Phase, the dominant process is epithelial migration, and the appropriate documented response is surface protection, moisture balance, and shear control.

## Results

- Improved completeness of wound documentation, with consistent identification of both local and systemic healing barriers.
- Stronger physiologic alignment between assessment and plan, reducing phase–intervention mismatch.
- Clearer medical necessity justification for advanced therapies and procedural interventions.
- Reduction in redundant or incompatible dressing combinations driven by non-physiologic product stacking.
- Improved continuity of care across providers through standardized phase and barrier classification.

## Discussion

Chronic wound care is fundamentally a problem of impaired biology rather than insufficient product selection. When documentation and treatment planning are driven primarily by dressing categories and general wound types, the physiologic drivers of delayed healing may be overlooked or insufficiently addressed. A framework organized around healing phase and impairment domains allows clinicians to document what the wound requires biologically rather than what is merely applied topically.

By structuring wound encounters around measurable biologic states and explicitly identifying both local and systemic barriers, documentation becomes more internally consistent and clinically defensible. Phase-based reasoning reduces therapeutic mismatch, supports appropriate sequencing of interventions, and strengthens communication between providers. A physiology-centered model also improves regulatory clarity by demonstrating that interventions are selected in response to identifiable biologic impairments rather than preference or routine.

This approach reframes chronic wound management as a dynamic process of biologic problem-solving rather than a static process of product selection, supporting more consistent, transparent, and defensible wound care.

## References

- Singer AJ, Clark RA. Cutaneous wound healing. *N Engl J Med.* 1999;341(10):738-746.
- Schultz GS, et al. Wound bed preparation: a systematic approach to wound management. *Wound Repair Regen.* 2003;11(suppl 1):S1-S28.
- Falanga V. The chronic wound: impaired healing and solutions in the context of wound bed preparation. *Blood Cells Mol Dis.* 2004;32(1):88-94.
- Guo S, DiPietro LA. Factors affecting wound healing. *J Dent Res.* 2010;89(3):219-229.
- Frykberg RG, Banks J. Challenges in the treatment of chronic wounds. *Adv Wound Care.* 2015;4(9):560-582.
- Armstrong DG, et al. Diabetic foot ulcers and their recurrence. *N Engl J Med.* 2017;376:2367-2375.
- Steed DL. Debridement. *Am J Surg.* 2004;187(5A):71S-74S.
- Junker JR, et al. Reevaluation of the clinical relevance of wound pH. *Wound Repair Regen.* 2013;21(3):335-343.
- Nussbaum SR, et al. An economic evaluation of the impact of chronic wounds. *Value Health.* 2018;21(1):27-32.
- Woo KY, Sibbald RG. Local wound care for healing chronic wounds. *Adv Skin Wound Care.* 2010;23(9):421-436.

